

ABSTRACT OF THE DISCLOSURE

The present invention provides an image processing apparatus that efficiently identifies input characters and the like by an intensity image analysis based on range information. The image processing apparatus performs distance measurement by performing three-dimensional measurement by pattern projection to characters written to a manuscript, whiteboard, and the like, gets an intensity image used as a so-called actual image and an image for distance measurement in parallel, and identifies input characters by an intensity image analysis based on range information. The image processing apparatus picks up characters, patterns, and the like written onto paper or the like with a pen, performs geometric transformation for picked-up images, and performs natural input character analysis and reading processing. Furthermore, by comparing images picked up in a time-series, noise elimination and manuscript position modifications become possible.